

R E M A R K S

In a prior restriction requirement, the Office restricted the claims into three groups. Applicants elected to pursue claims 172-197, which are currently pending. Each of the issues raised in the present Office Action mailed September 19, 2007 is addressed in turn below.

Claim Interpretation

The Examiner noted that the claims are extremely broad and excessively wordy. With respect to claim breadth, Applicants note that the claims are patentable over the cited art (see below). The term “extremely” is a relative term. Applicants believe that the claims are not overly broad, if this is what is implied by the use of the term. With respect to wordiness, Applicants disagree. The Examiner has not rejected the claims under 35 U.S.C., section 112, 2nd paragraph. Applicants therefore assume that the Office views the claims as appropriately clear and definite.

The Examiner makes certain interpretations of the claims related to multiple synthesis and rolling circle strategy to assist with assessing the prior art. Applicants respectfully disagree, to the extent these interpretations are intended as limiting elements of the claim scope. Unless the claims specifically recite such elements, the claims are not limited to such elements. Certain claims contain the step of “circularizing” certain components. These steps require that a particular component be made into a circular molecule. While such claims may encompass rolling circle strategies, the claims are not limited to rolling circle strategies unless they so specify. Likewise, certain of the claims have multiple synthesis steps. However, others, while encompassing methods that involve multiple synthesis steps, may not require multiple synthesis steps.

Applicants believe the claims are clear. For example, independent claim 172 recites six steps comprised in the method:

- (a) obtaining an RNA polymerase that can transcribe RNA using a single-stranded promoter;
- (b) obtaining single-stranded DNA comprising the target sequence that is present in

or complementary to a sequence in the target nucleic acid in the sample;

- (c) operably joining to the single-stranded DNA a single-stranded polynucleotide comprising a promoter that binds the RNA polymerase, thereby obtaining a single-stranded transcription substrate;
- (d) obtaining nucleoside triphosphates (NTPs) that are substrates for the RNA polymerase and that are complementary to canonical nucleic acid bases;
- (e) admixing the RNA polymerase, the single-stranded transcription substrate and the NTPs; and
- (f) incubating the RNA polymerase, the single-stranded transcription substrate and the NTPs to synthesize the transcription product.

Each of these steps is clear and concise.

The Cited Prior Art

The Office Action rejects the claims as being either anticipated or obvious in view of Kacian (U.S. 5,399,491), Kurn (20020058270), Ginsberg, and Diegelman. For anticipation and obviousness, the Office is required to find one, or a collection of references, that describe each and every element of the claims. In the case of anticipation, a single reference must describe each of the elements. In the case of obviousness, the elements may derive from multiple references, but still must all be present.

None of the cited references, alone or in combination, teach or suggest all of the elements of the present claims. Each of the cited references employs a double-stranded promoter sequence. In contrast, independent claim 172 (and all other claims, because they are dependent from claim 172), recite the step of “operably joining to the single-stranded DNA a single-stranded polynucleotide comprising a promoter that binds the RNA polymerase, thereby obtaining a single-stranded transcription substrate” (emphasis added). Because none of the cited references teach or suggest formation of a “single-stranded transcription substrate” by joining a single-stranded “polynucleotide comprising a promoter” to a “single-stranded DNA comprising the target sequence”, the claims are patentable over the cited art. In view of the above, Applicants request that the rejection be withdrawn.

CONCLUSION

Should the Examiner believe that a telephone interview would aid in the prosecution of this application, Applicants encourage the Examiner to call the undersigned at 608-218-6900.

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